

CHAL-1050-60

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17 June 1960

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MEMORANDUM FOR : Chief, Operations, DPD-DD/P

SUBJECT : Single Sideband Communications Equipment for

REFERENCE : (a) CHAL-0993, dated 27 May 1960
(b) CHAL-1039, dated 14 June 1960

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1. References requested the investigation of the use of single sideband radio equipment for use in

2. A study has been conducted of all available single sideband equipment, and certain recommendations are made as outlined below.

(a) For use in the aircraft, it is recommended that a Collins Model 618-T3 Transceiver be employed. This equipment would provide both a transmitting and a receiving capability. It is a highly stable equipment which was designed for airborne operation. It consists of one full ATR size case with its own internal power supply and a console mounted control panel approximately three inches high. Total weight, excluding cabling, is fifty-two (52) pounds. There is an absolute minimum of operating controls, it being only necessary to select the frequency and adjust the volume level and on - off switch. All tuning is automatic. The antenna would probably be of the long wire type, extending from the vertical stabilizer to a forward point on the fuselage. The price of the equipment is approximately \$11,000 each.

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(b) For the ground station, it is proposed to use a Collins Type KWT-6 Transceiver, which provides complete transmitting-receiving facilities. The price of this equipment is \$15,000. A likely choice for the antenna system could be a Collins Log-Periodic Antenna priced at \$12,000.

3. Mention has been made of using Collins KWM-2 type equipment for this application. It is pointed out that this equipment was designed for the amateur radio market with no consideration given to ruggedization or environmental conditions other than those encountered in "ham" use. In addition, it requires considerable operator skill to obtain maximum performance. It is considered that use of this or similar equipment would result in less than adequate performance.

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4. It is recommended that the requirement for single sideband radio equipment in be implemented as described in para (2) above.

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Chief, Development Branch
DPD-DD/P

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